

FIGURE 1

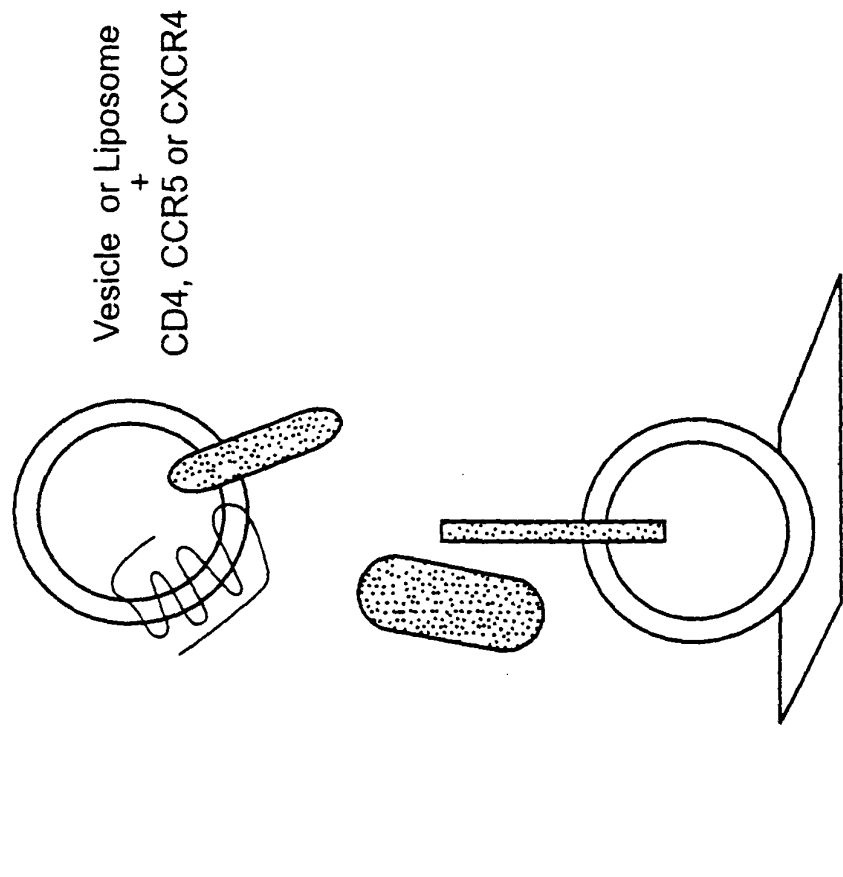


FIGURE 2

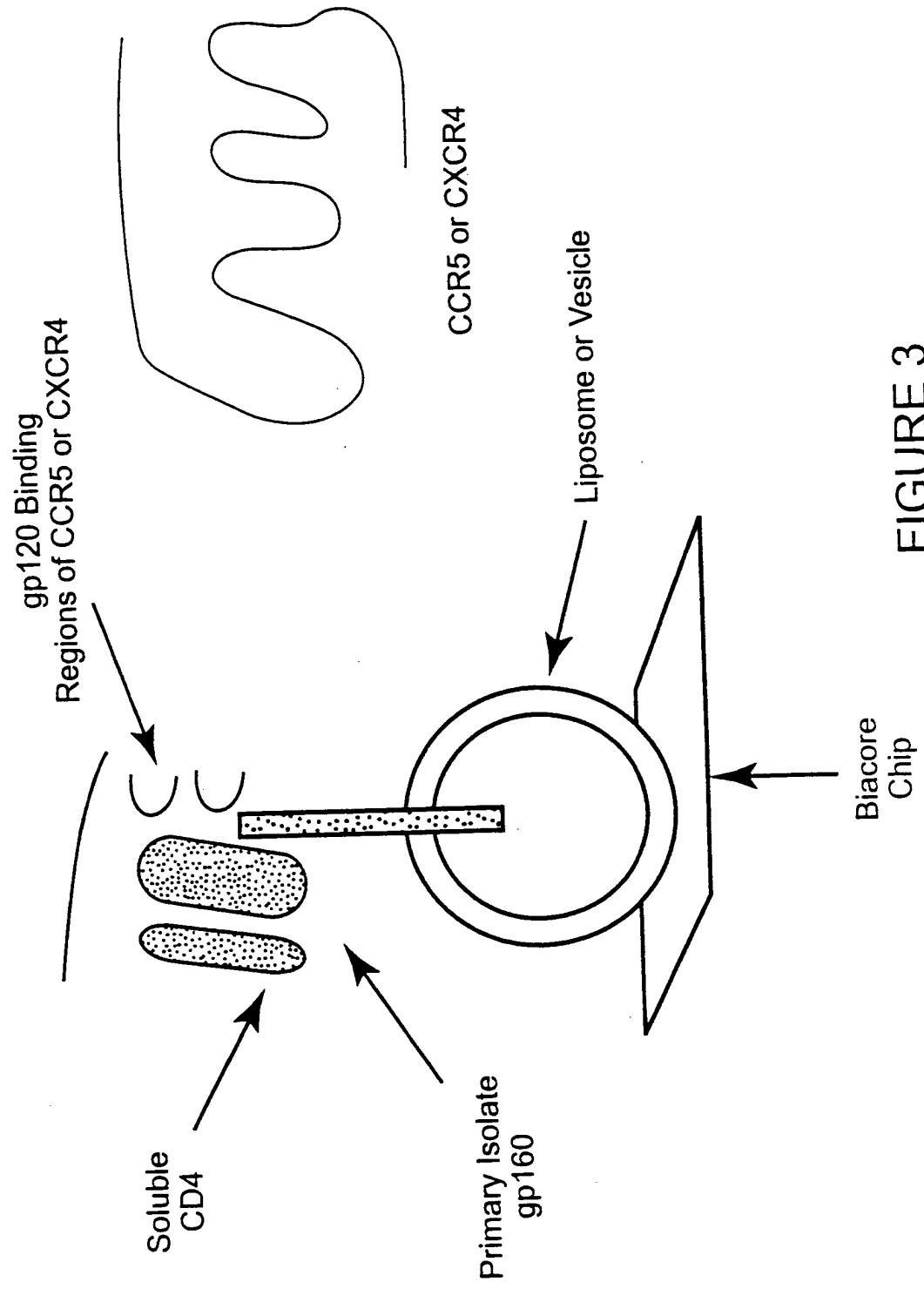


FIGURE 3

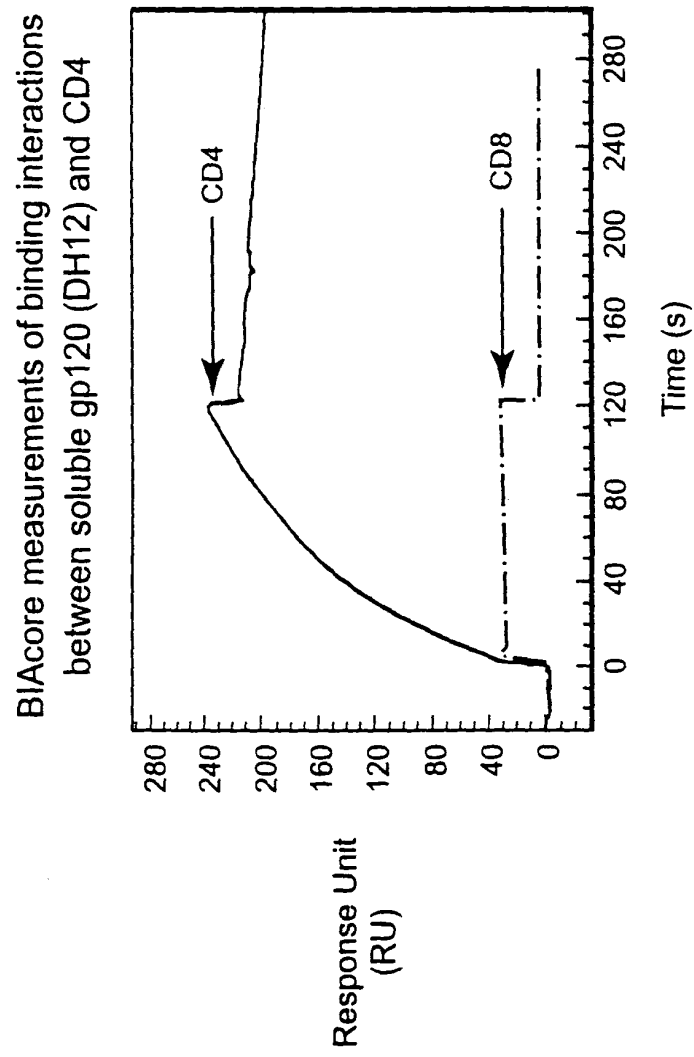


FIGURE 4

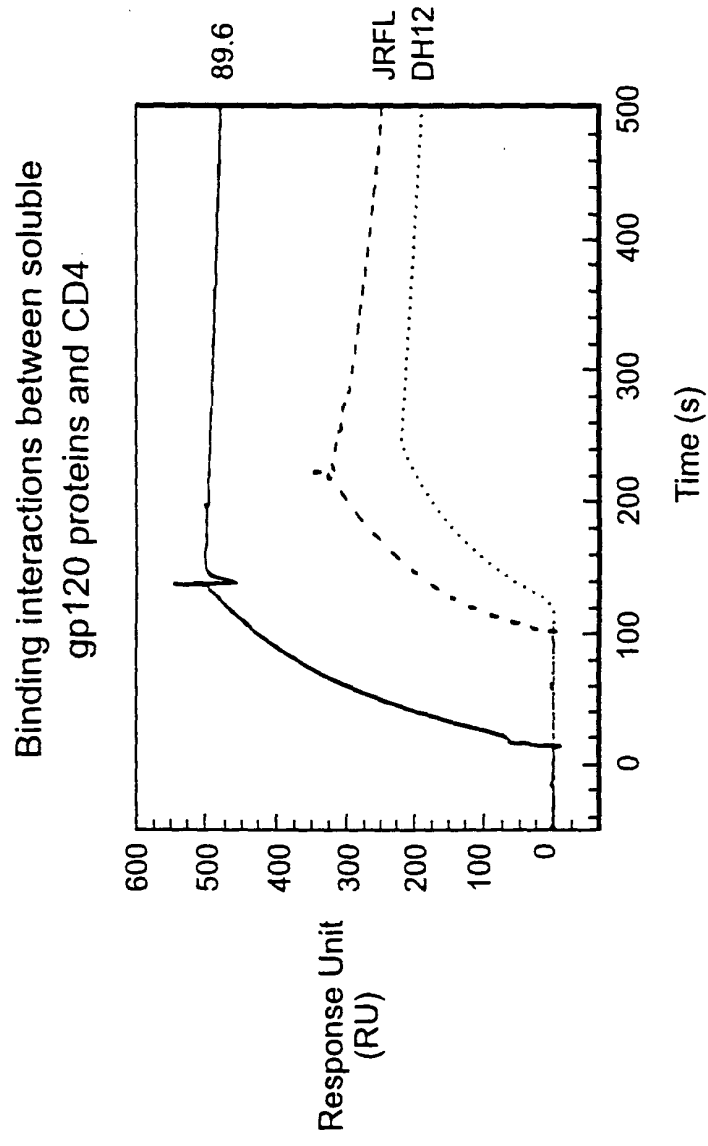


FIGURE 5

Kinetics and binding affinities of the interactions  
between gp120 and CD4

gp120	$k_a M^{-1} s^{-1}$ (on-rate)	$k_d s^{-1}$ (off-rate)	$K_d$ M	$t_{1/2}$ min
JRFL	$6.0 \times 10^3$	$8.84 \times 10^{-4}$	$1.5 \times 10^{-7}$	14
DH12	$4.9 \times 10^3$	$3.86 \times 10^{-4}$	$7.8 \times 10^{-8}$	30
89.6	$4.6 \times 10^3$	$8.48 \times 10^{-5}$	$1.8 \times 10^{-8}$	136

FIGURE 6

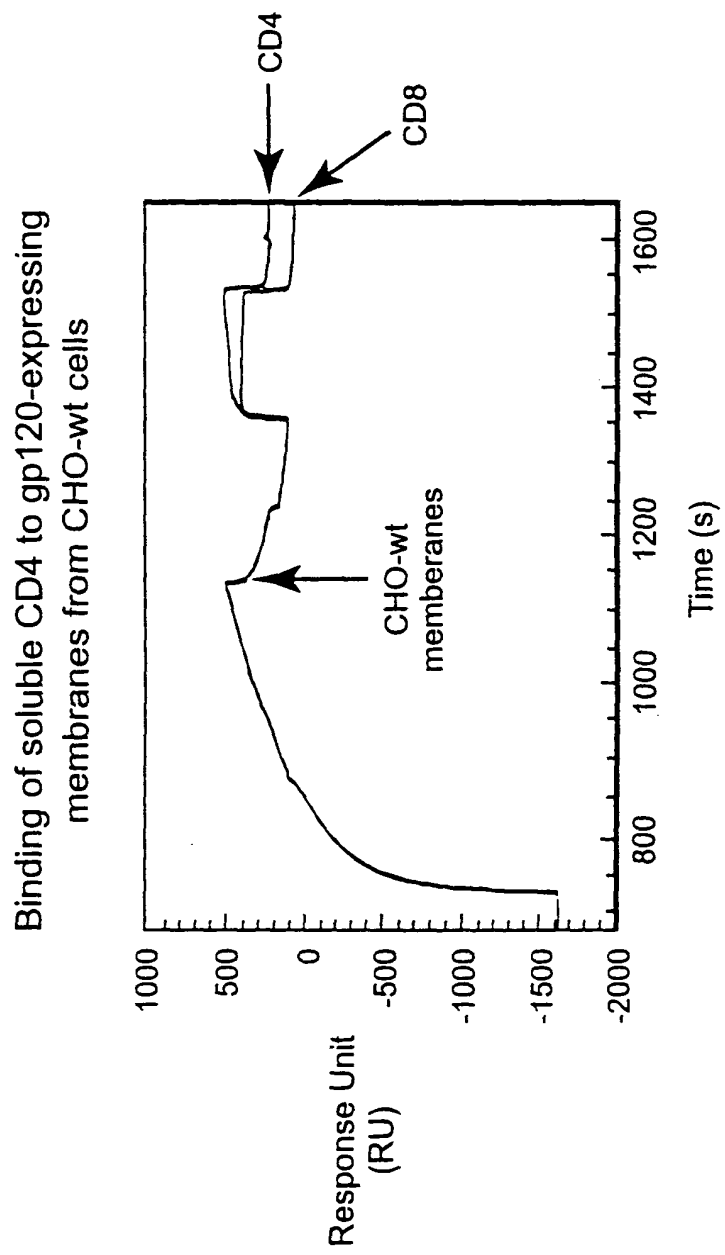


FIGURE 7

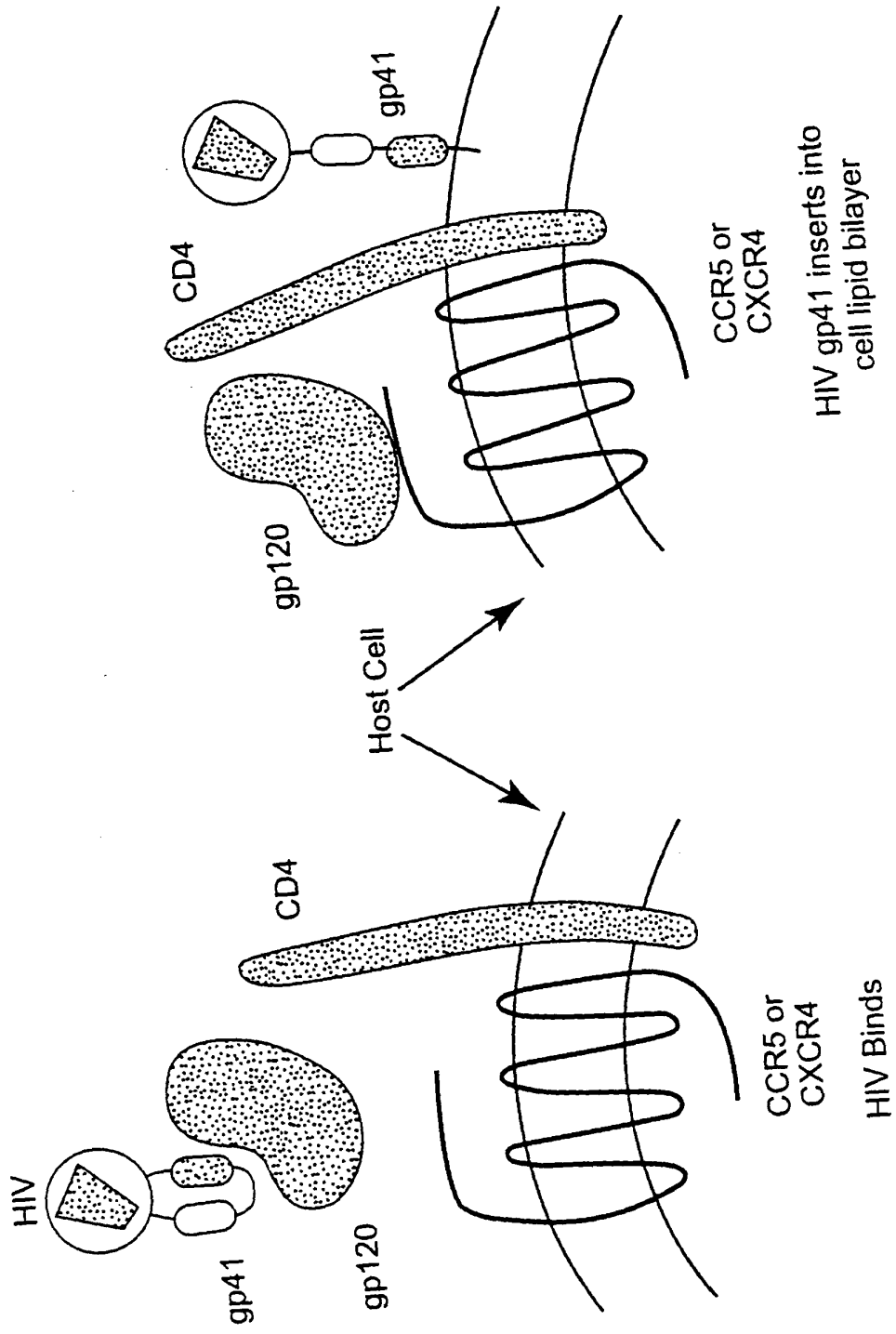
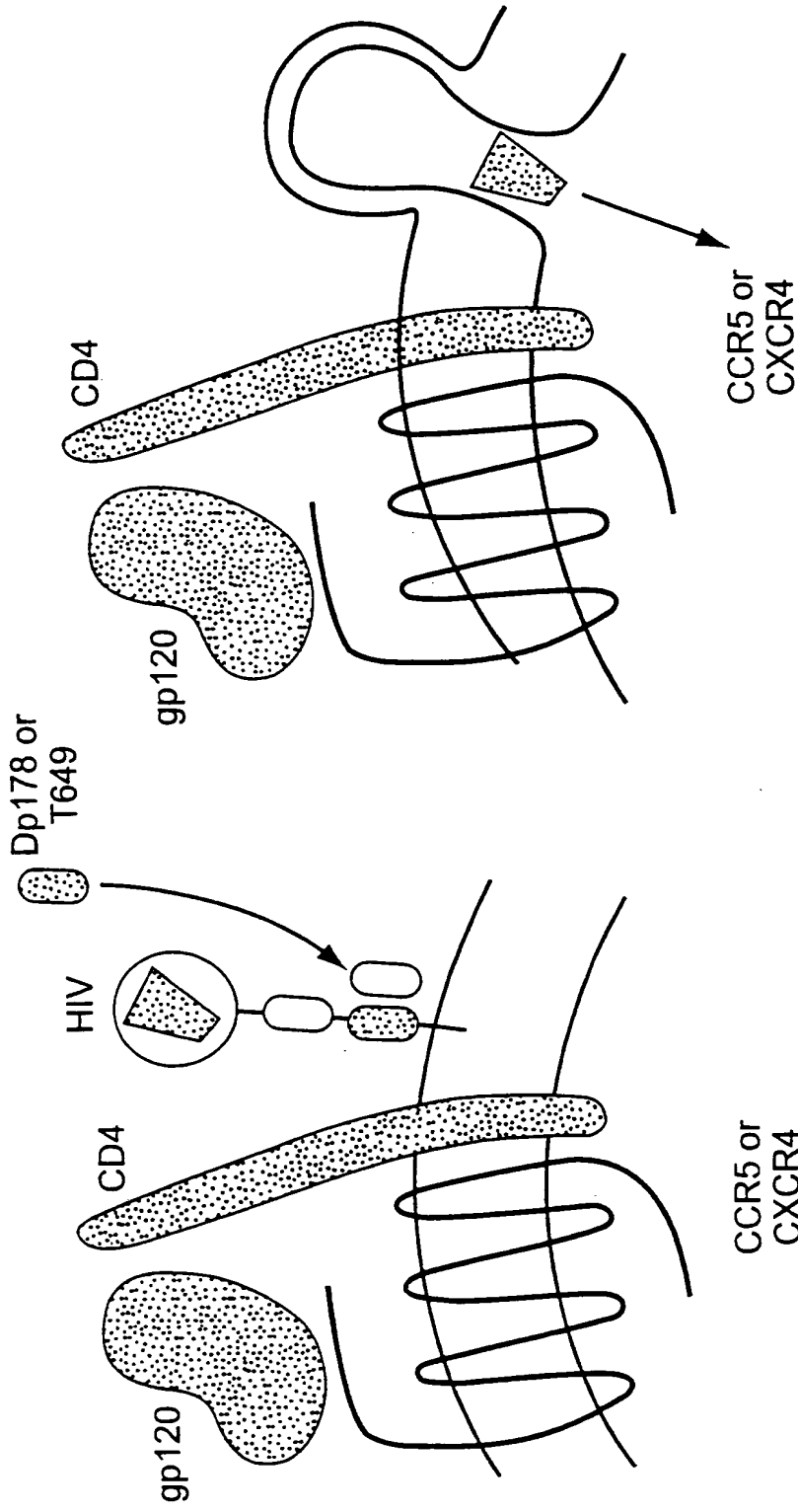


FIGURE 8



HIV fusion occurs  
in the absence of  
fusion inhibitory  
peptide

HIV fusion blocked  
by Dp178 or T649  
peptides producing  
"frozen" fusion intermediate

FIGURE 9

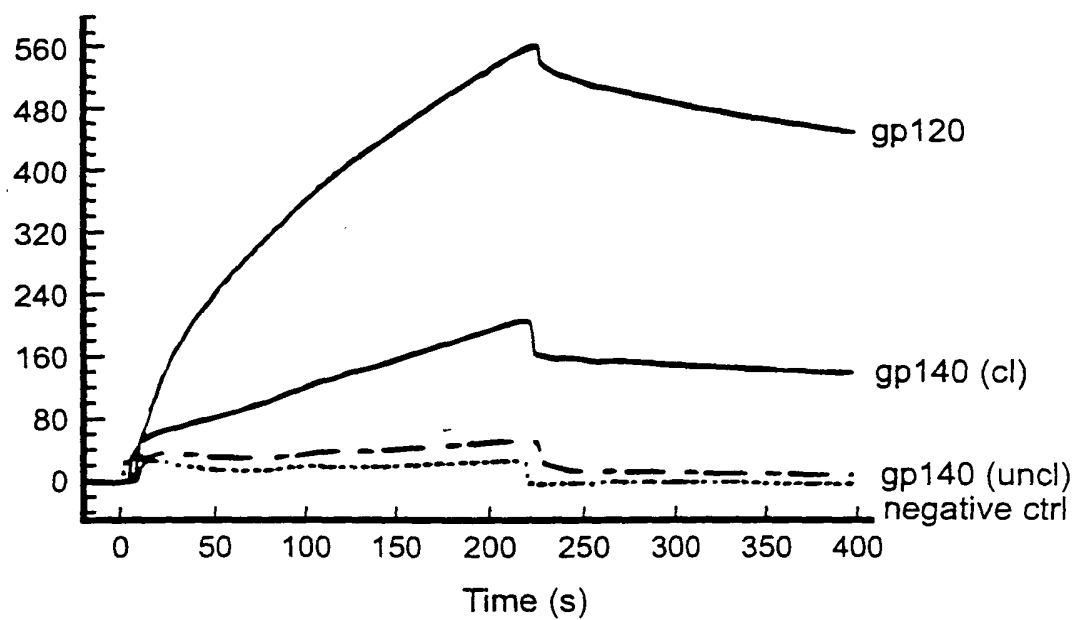


FIGURE 10A

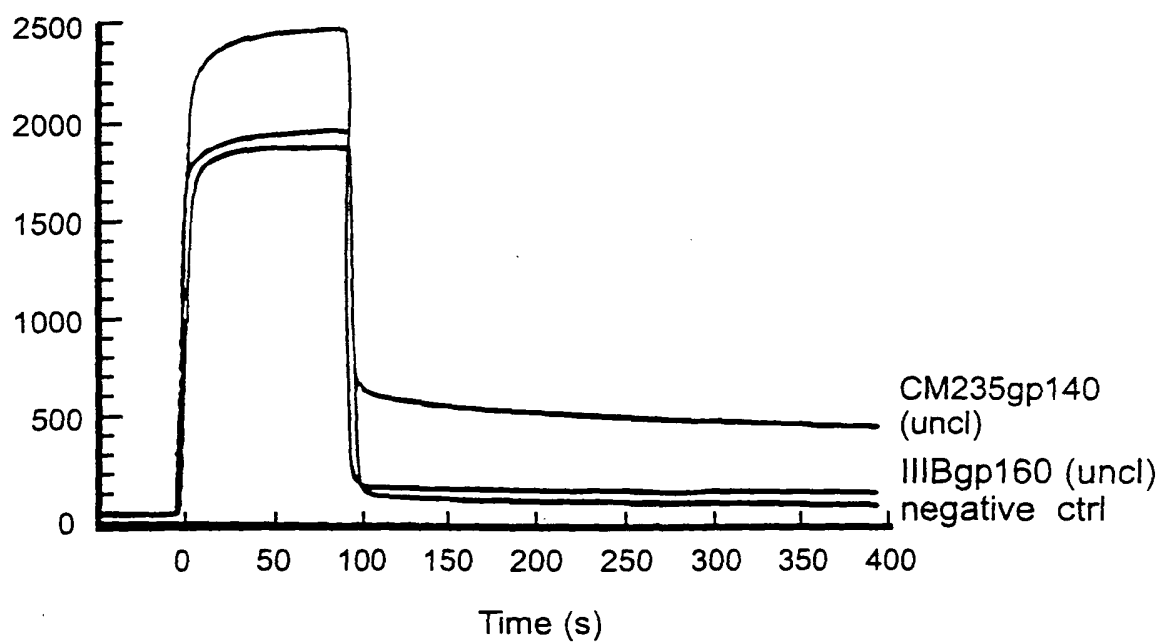


FIGURE 10B

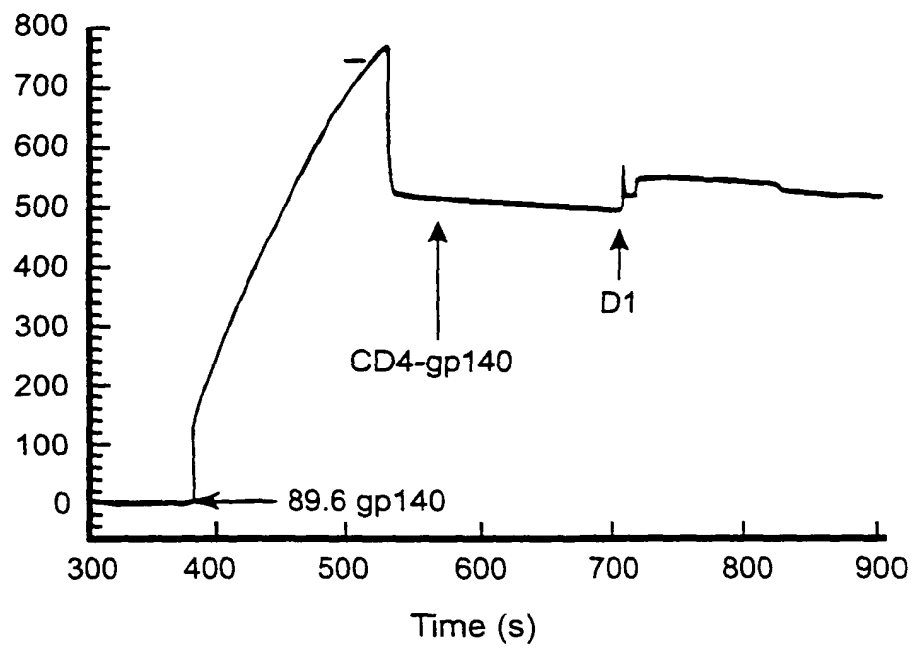


FIGURE 10C

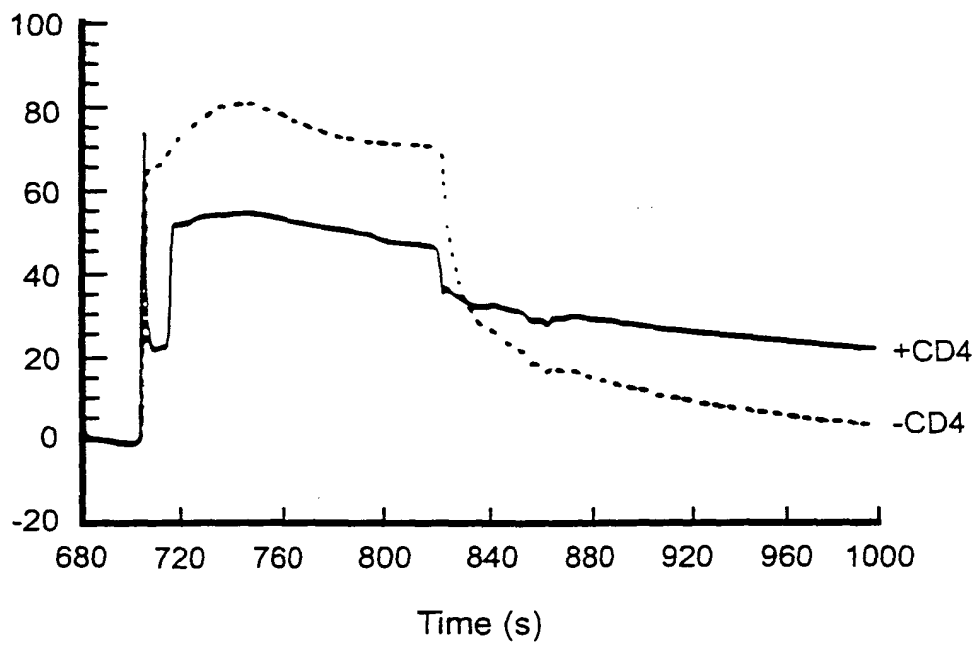


FIGURE 10D

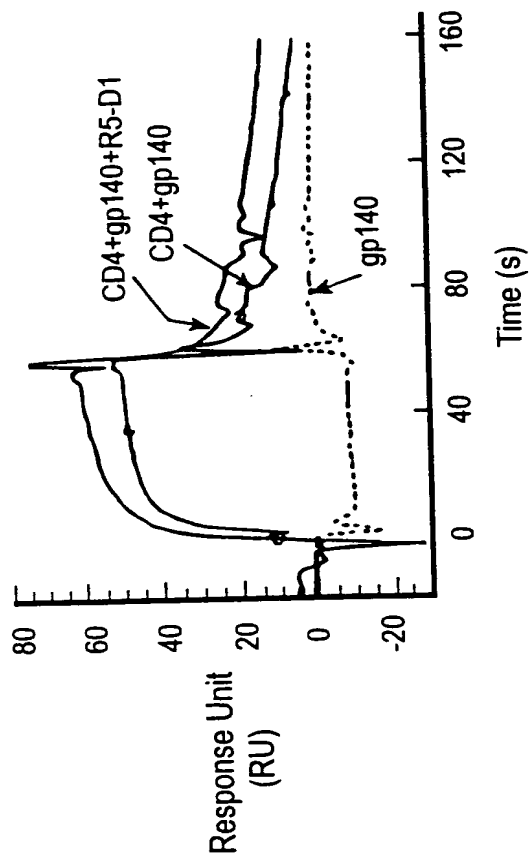


FIGURE 11A

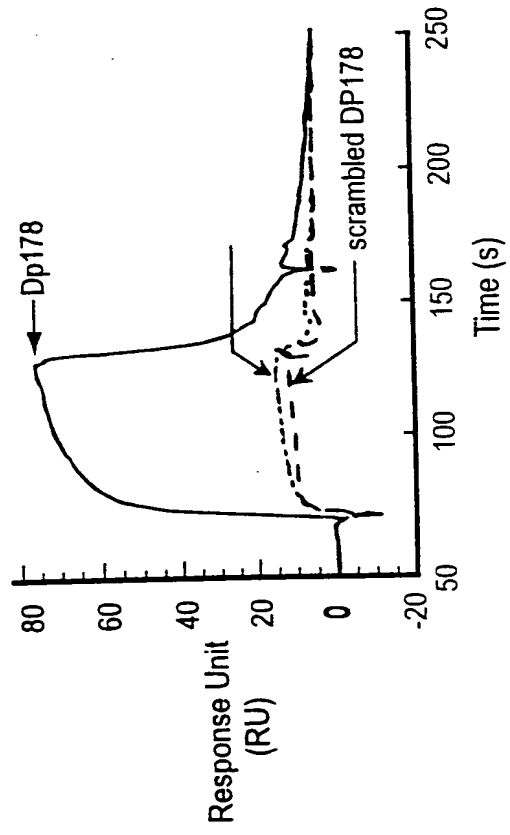


FIGURE 11C

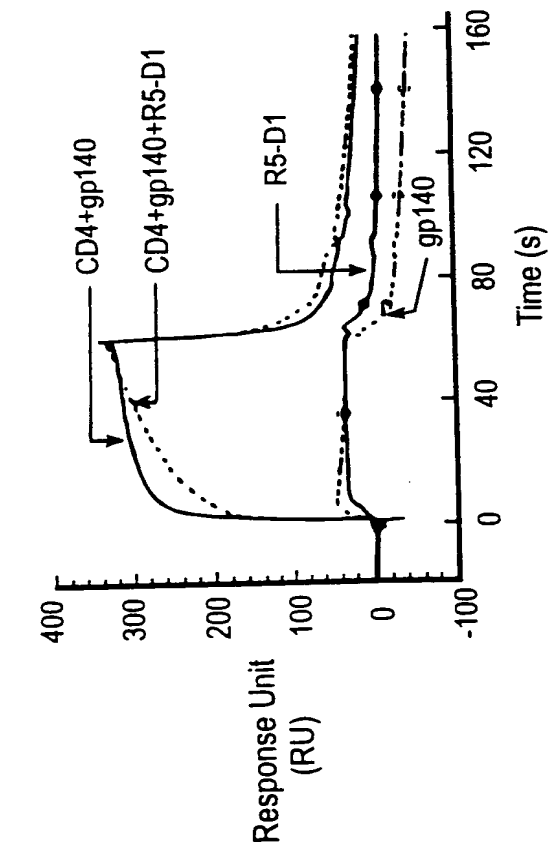


FIGURE 11B

89.6 gp140	$K_a$ $M^{-1}s^{-1}$	$K_d$ $s^{-1}$	$K_d$ $\mu M$	$t_{1/2}$ s	$R_m$ RU
<u>DP178</u>					
CD4+gp140	$7.9 \times 10^3$	$5.6 \times 10^{-3}$	0.7	124	320
CD4+gp140+R5-D1	$3.47 \times 10^3$	$3.86 \times 10^{-3}$	1.1	180	328
gp140+R5-D1	nm	nm	nm	nm	38
gp140	nm	nm	nm	nm	35
<u>T694QL</u>					
CD4+gp140	$6.2 \times 10^3$	$1.46 \times 10^{-2}$	2.4	48	53
CD4+gp140+R5-D1	$5.1 \times 10^3$	$5.3 \times 10^{-3}$	1.0	131	64
gp140+R5-D1	nm	nm	nm	nm	0
gp140	nm	nm	nm	nm	0

FIGURE 11D

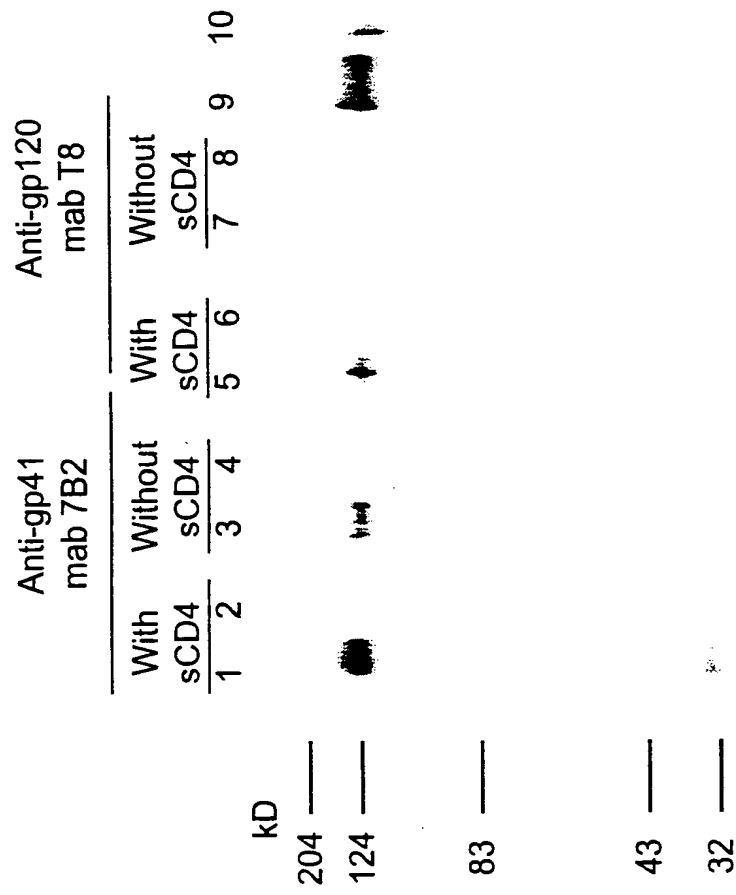


FIGURE 12

Induced Binding of HR-2 Peptides  
to Soluble HIV 89.6 gp140 Envelope

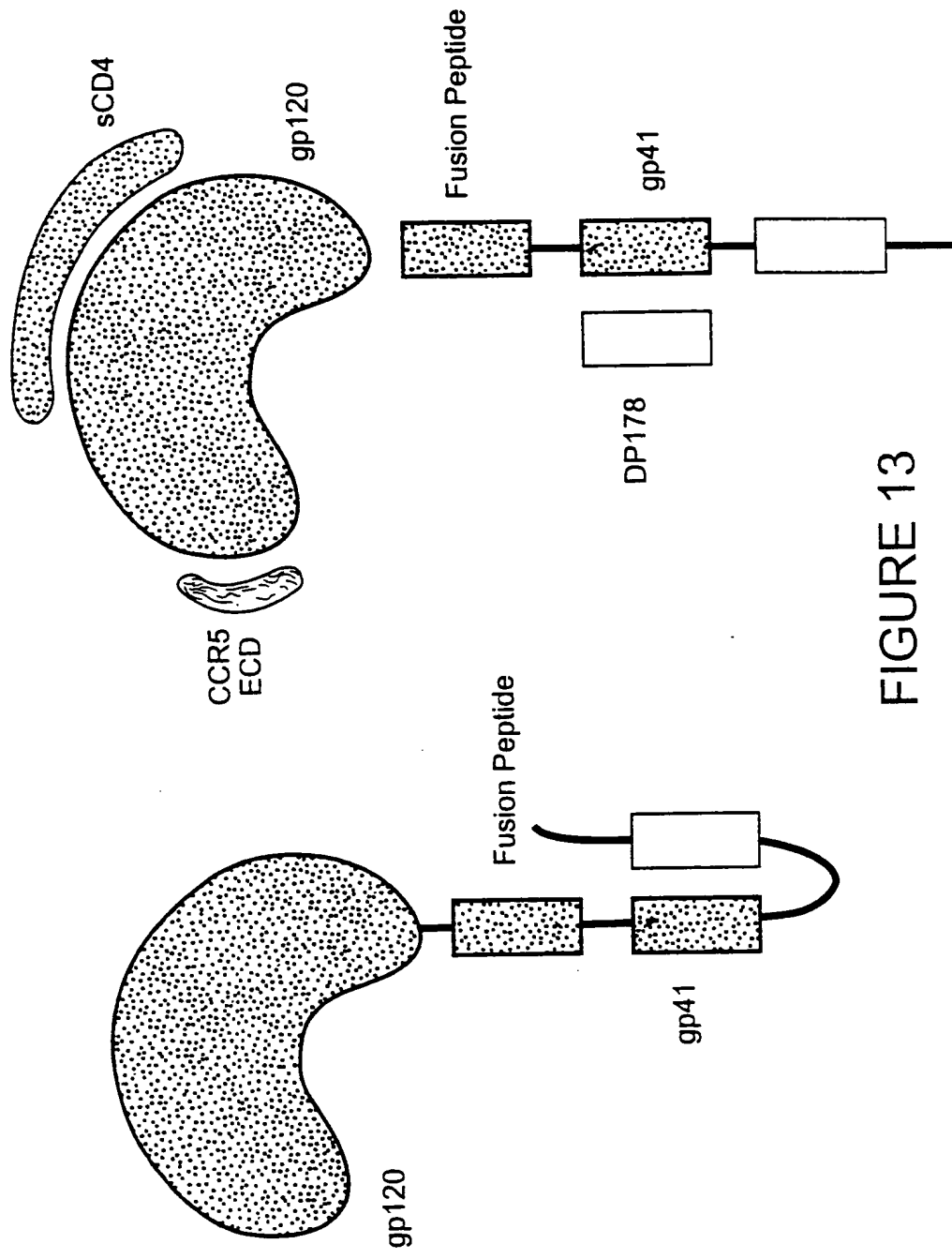


FIGURE 13

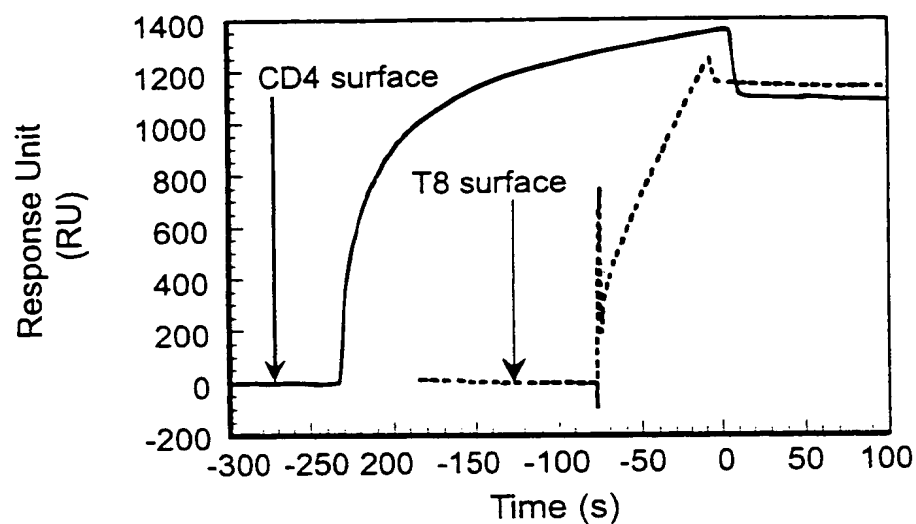


FIGURE 14A

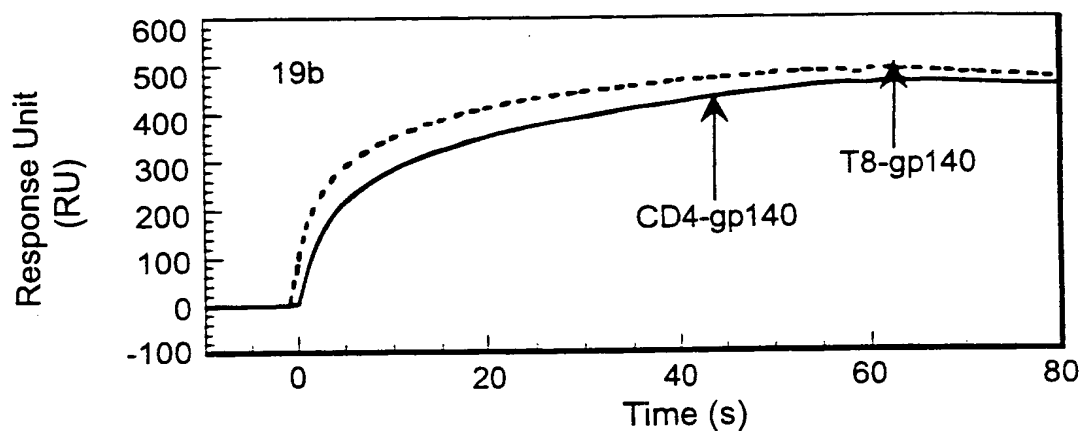


FIGURE 14B

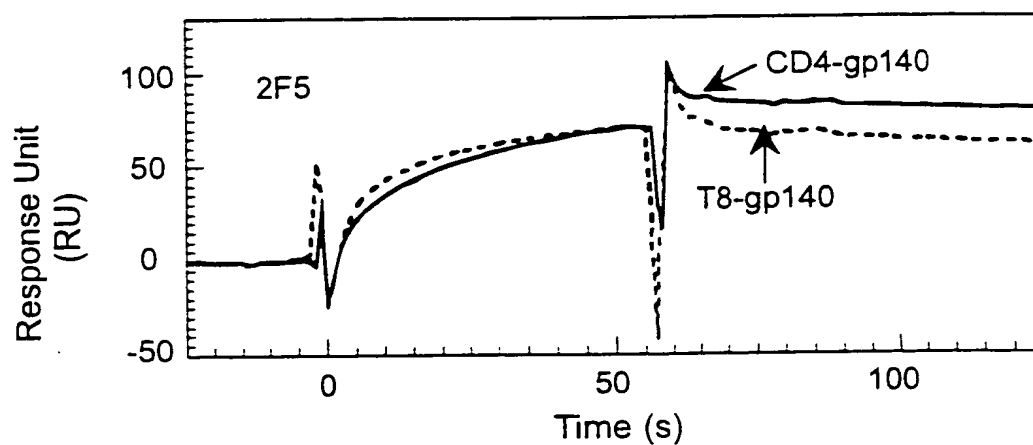


FIGURE 14C

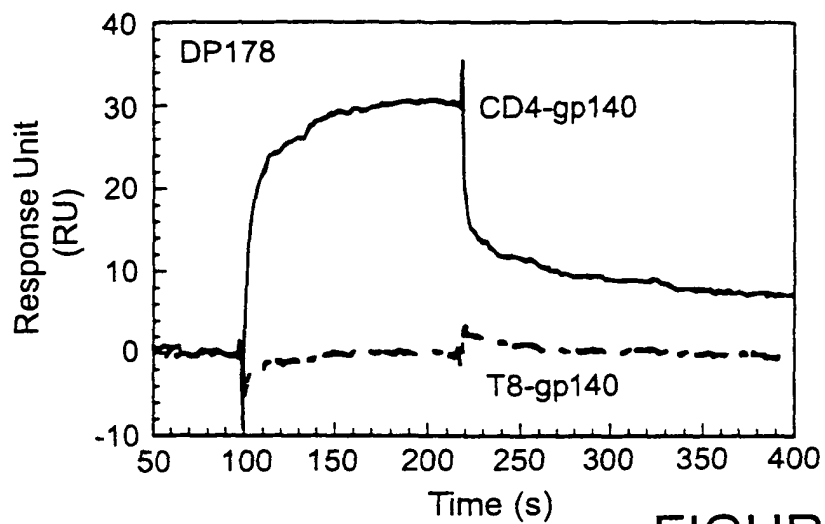


FIGURE 14D

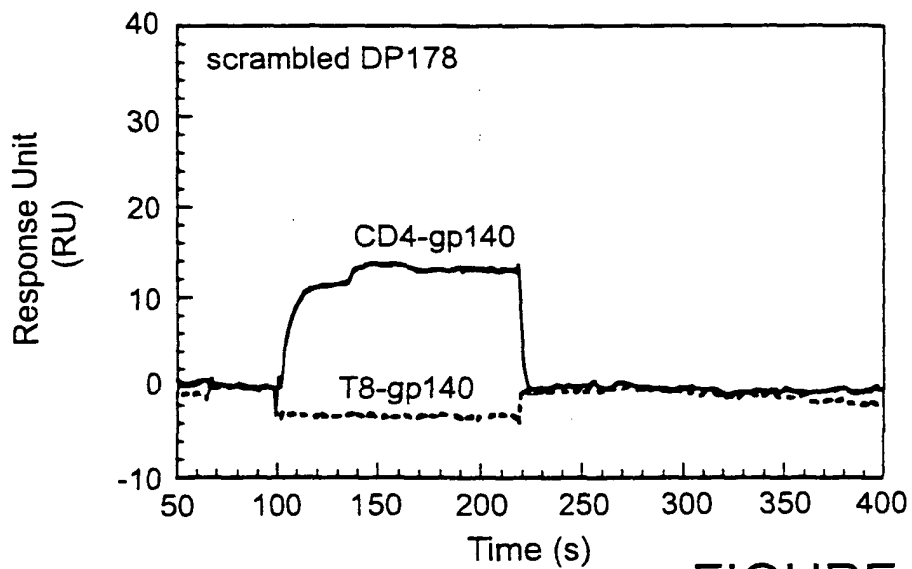


FIGURE 14E

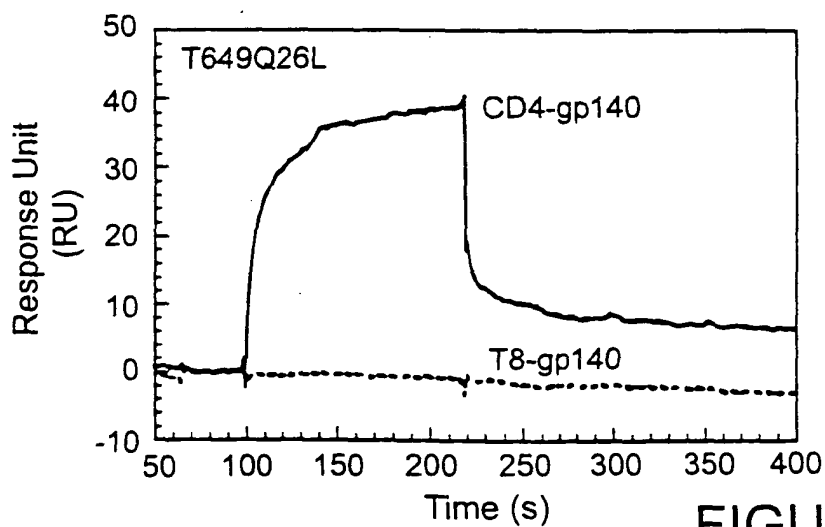


FIGURE 14F

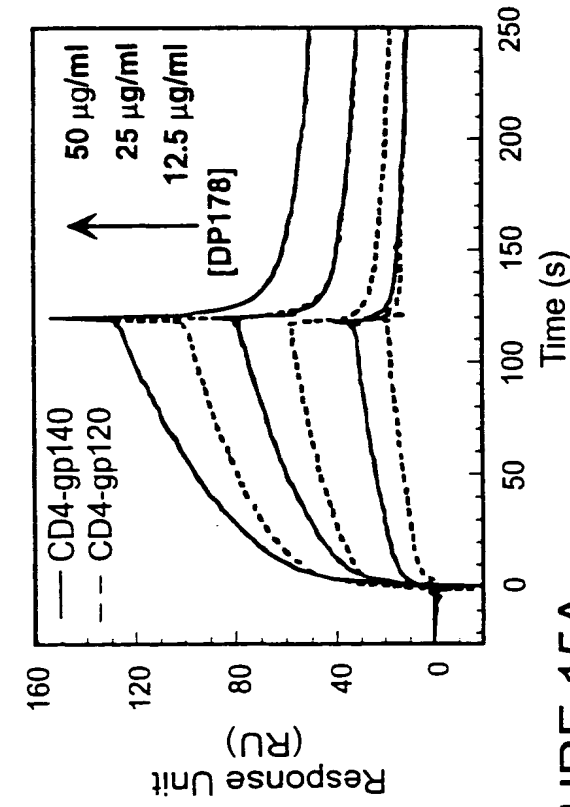


FIGURE 15A

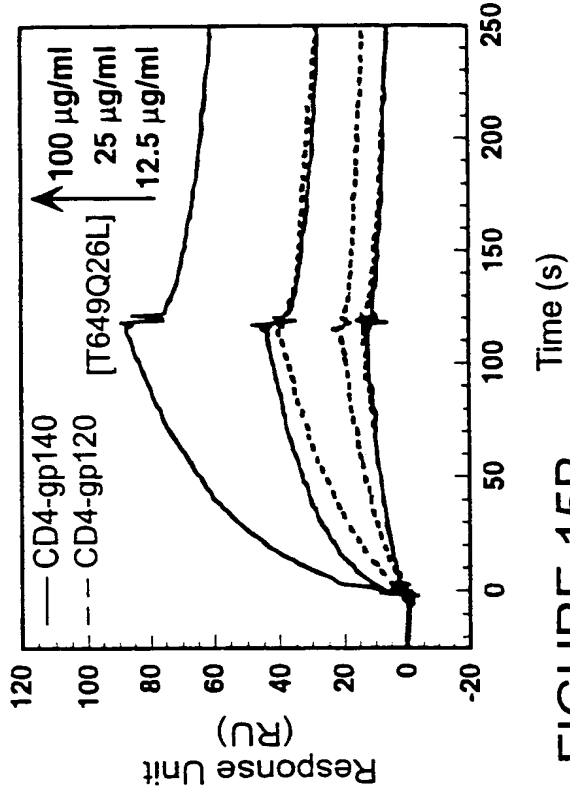


FIGURE 15B

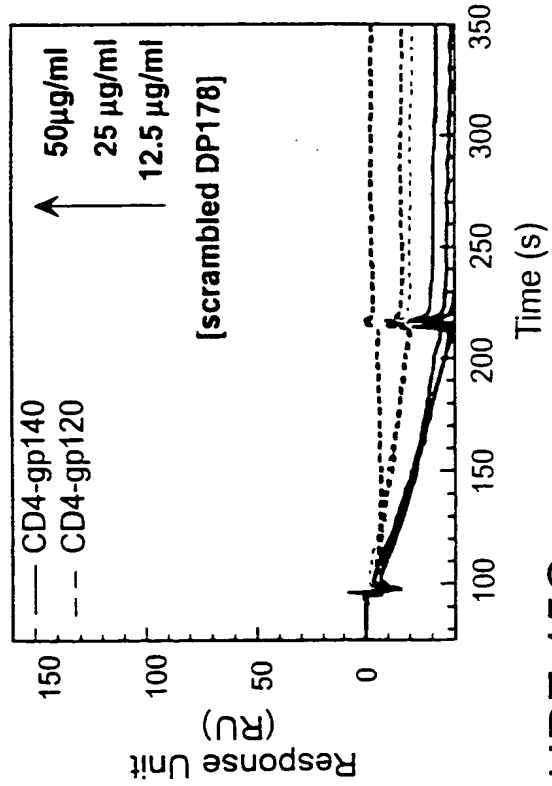


FIGURE 15C

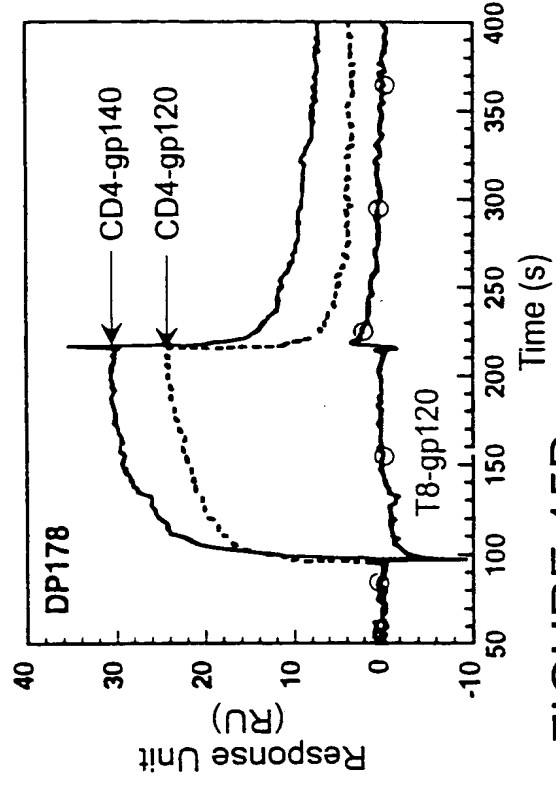


FIGURE 15D

	$k_{on}$ $M^{-1}s^{-1}$	$k_{off}$ $s^{-1}$	$K_d$ $\mu M$	$t_{1/2}$ $s$
<u>DP178</u>				
CD4-gp120	$0.75 \times 10^3$	$1.5 \times 10^{-3}$	2.0	462
CD4-gp140	$0.93 \times 10^3$	$1.0 \times 10^{-3}$	1.1	693
<u>T649Q26L</u>				
CD4-gp120	$1.26 \times 10^3$	$3.2 \times 10^{-3}$	2.54	217
CD4-gp140	$0.88 \times 10^3$	$1.1 \times 10^{-3}$	1.20	630

FIGURE 15E

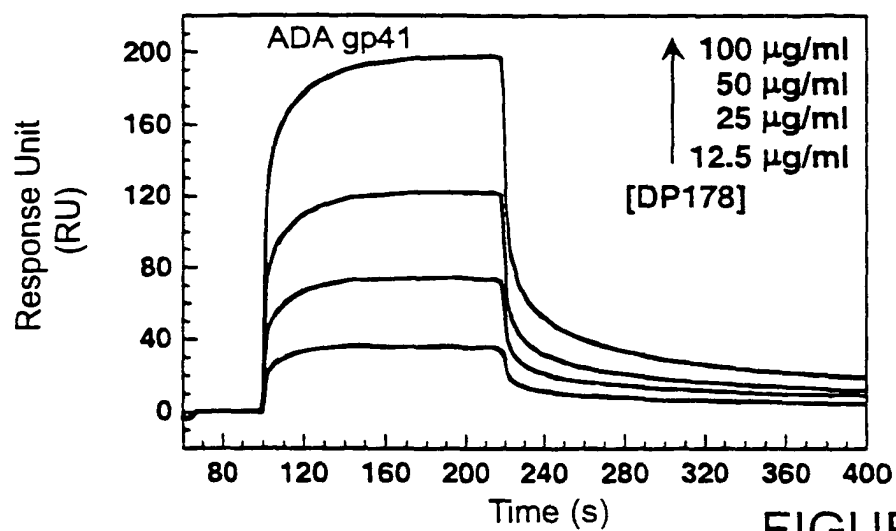


FIGURE 16A

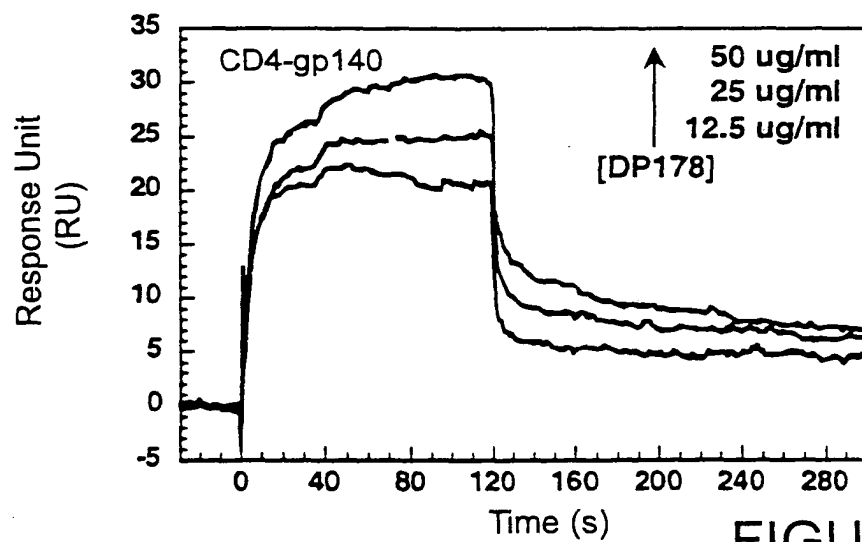


FIGURE 16B

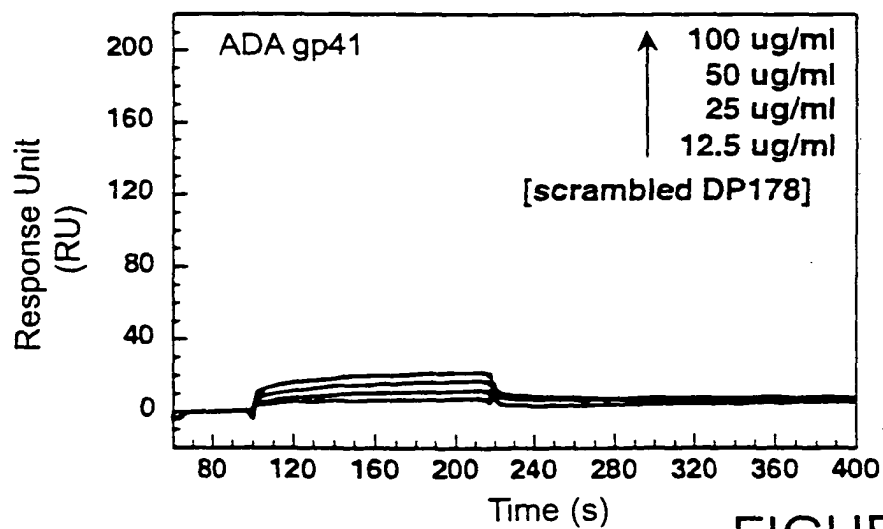


FIGURE 16C

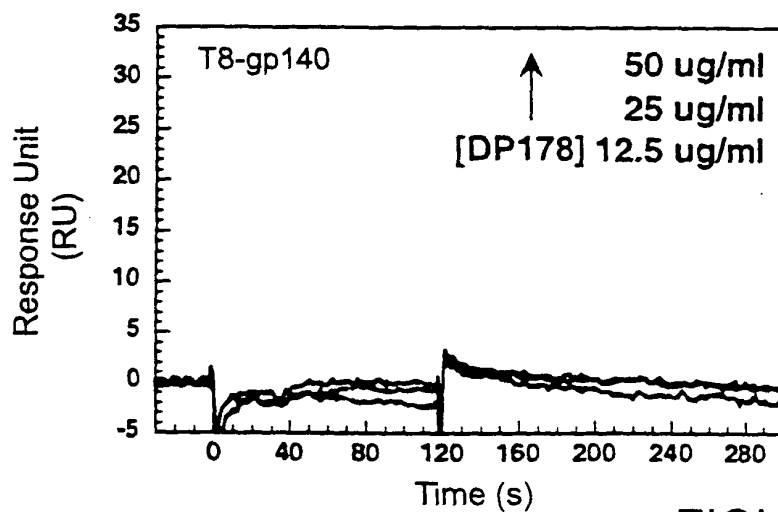


FIGURE 16D

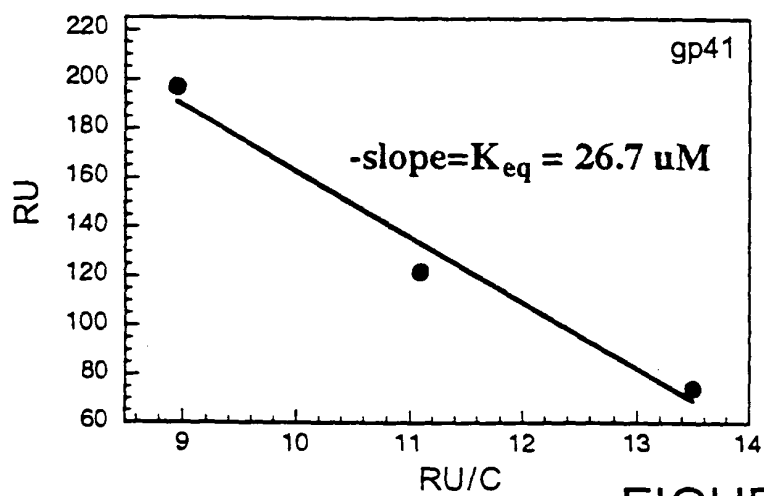


FIGURE 16E

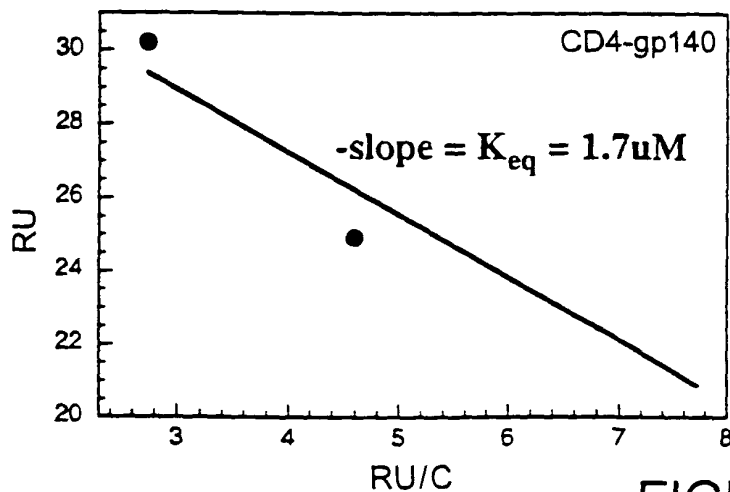


FIGURE 16F

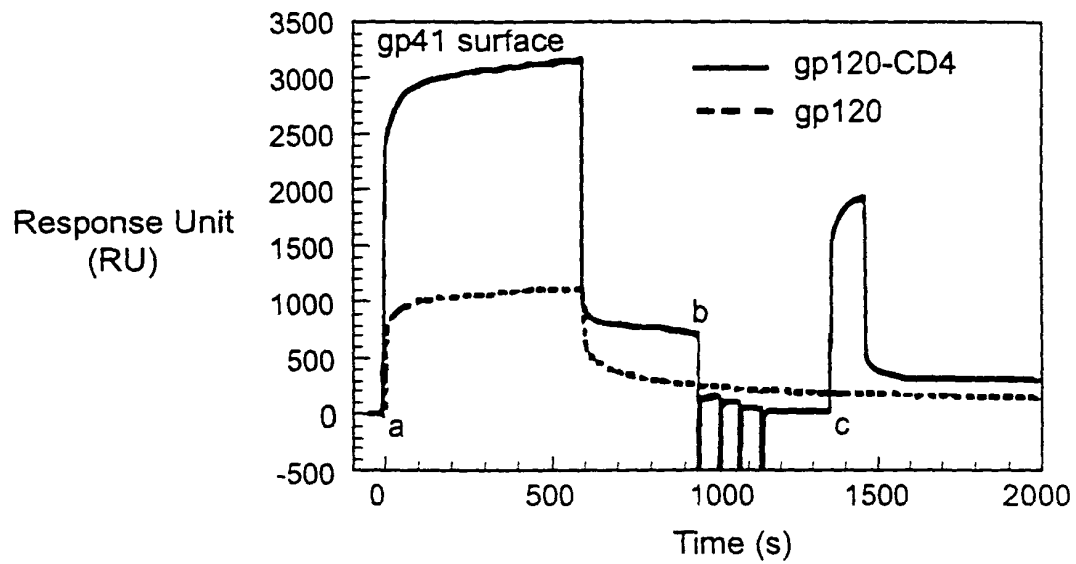


FIGURE 17A

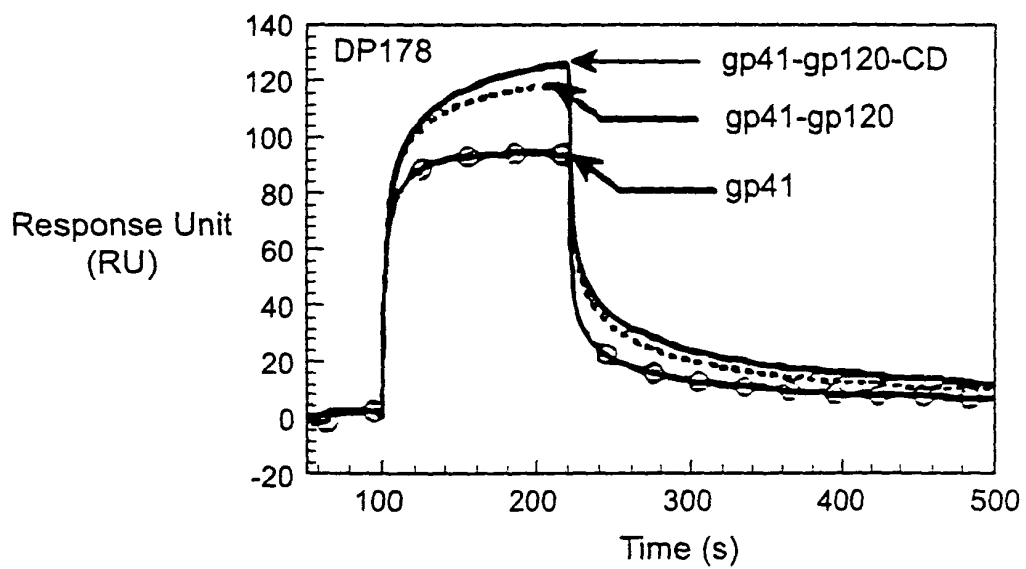


FIGURE 17B

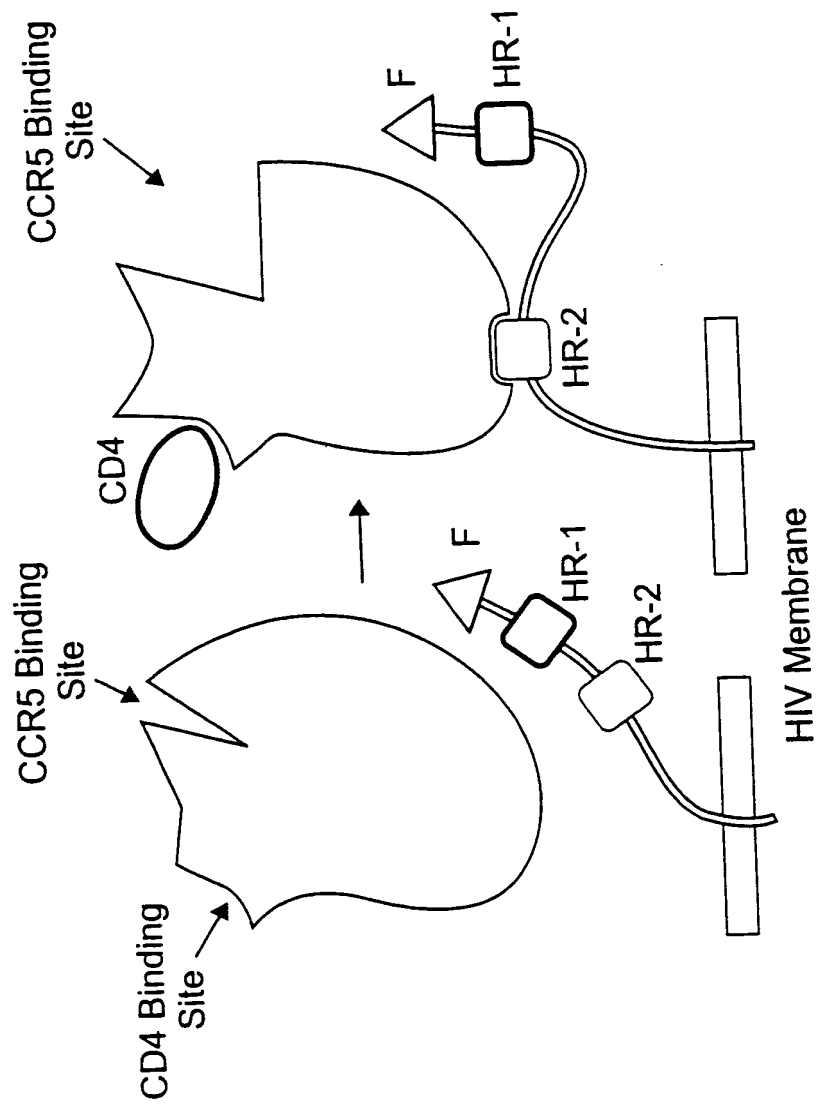


FIGURE 18

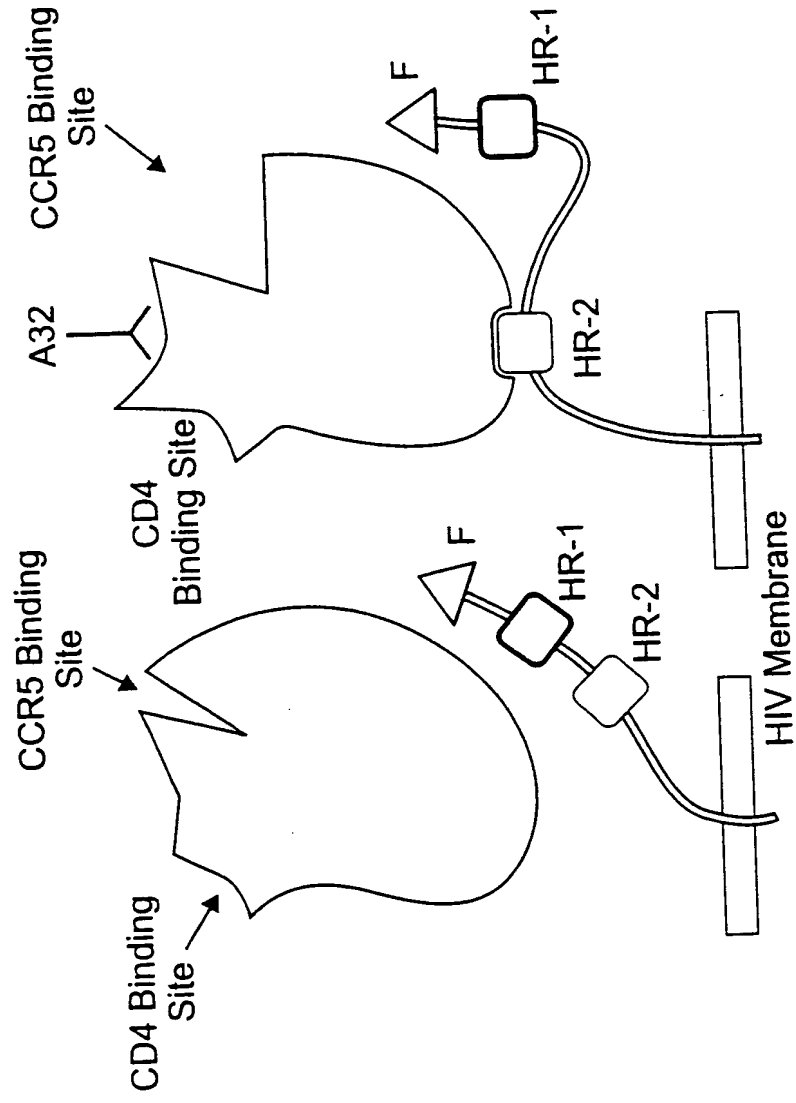


FIGURE 19

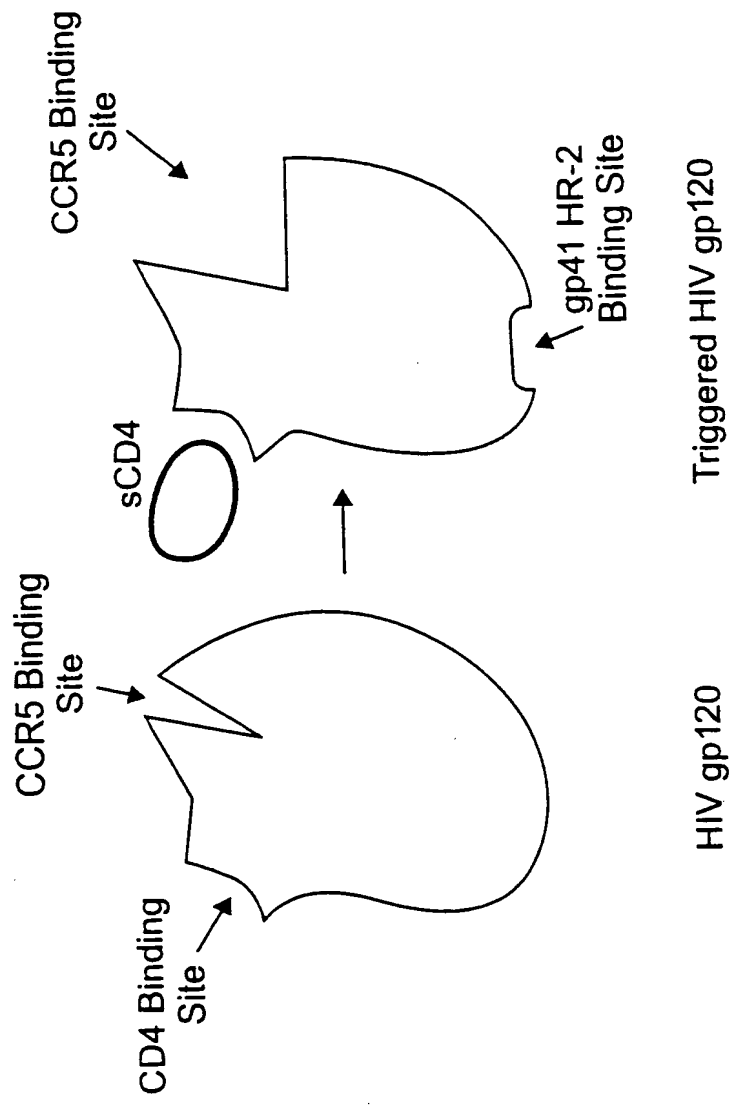


FIGURE 20

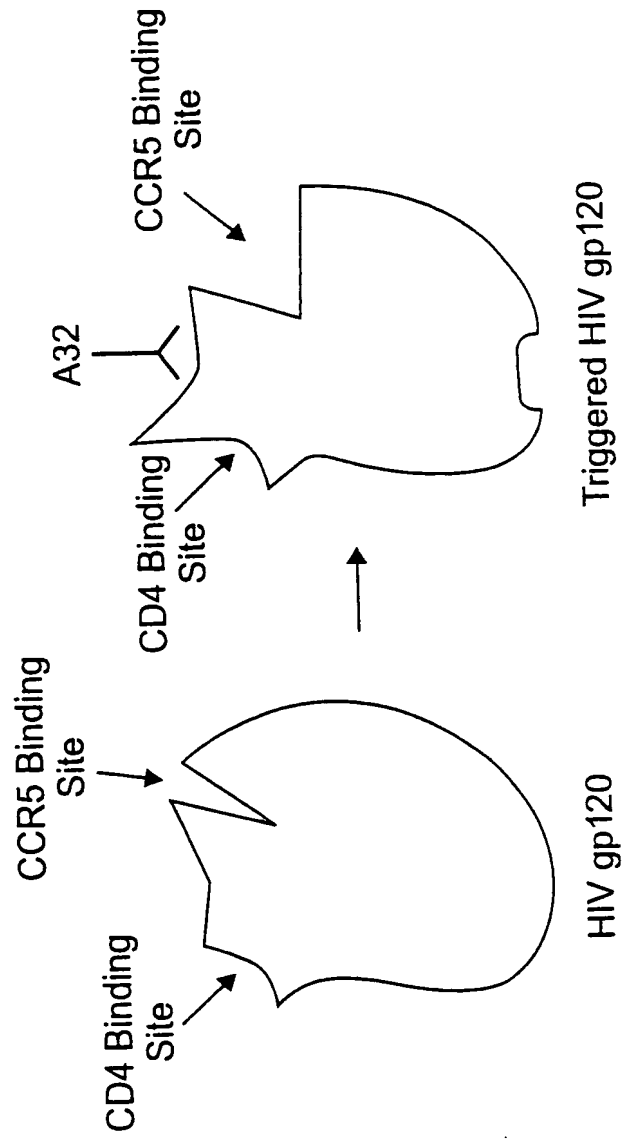


FIGURE 21

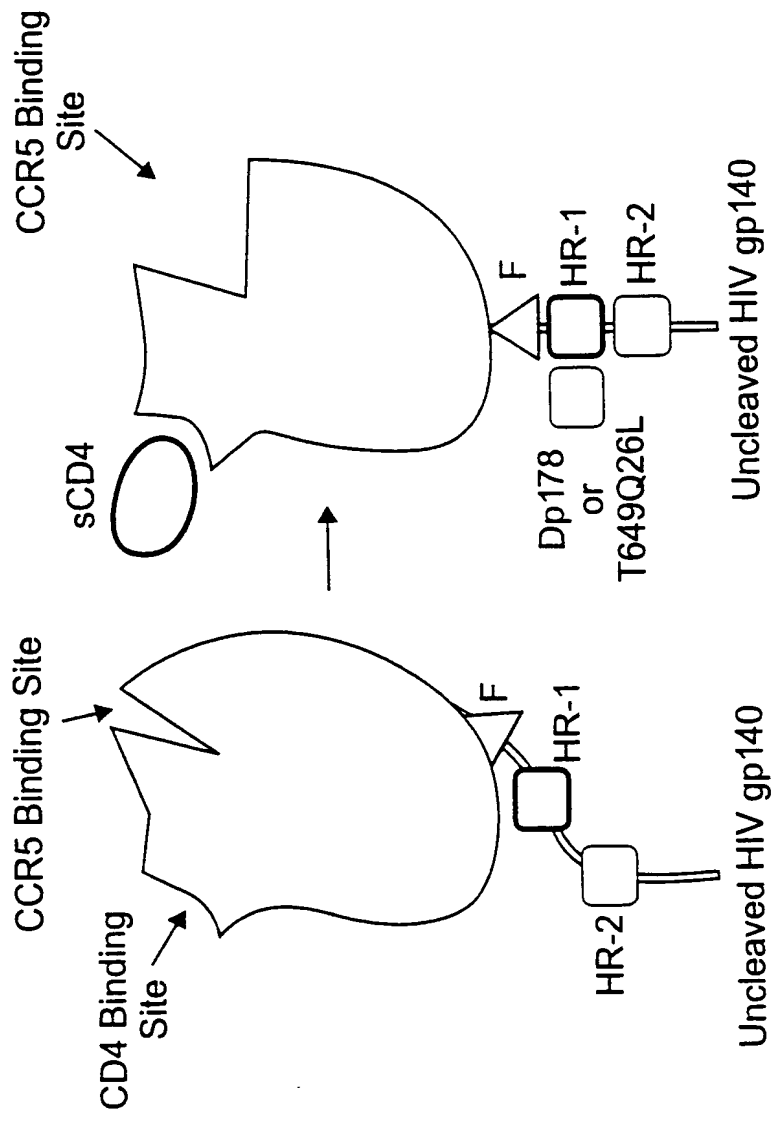


FIGURE 22

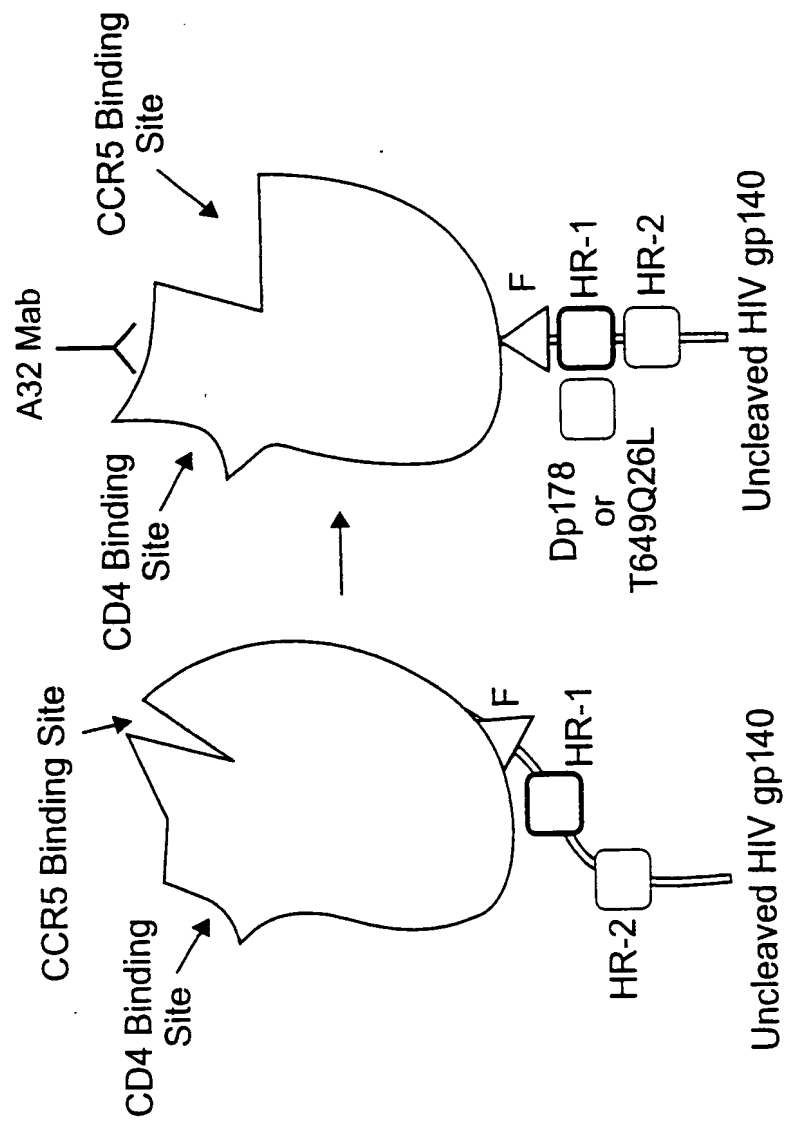


FIGURE 23

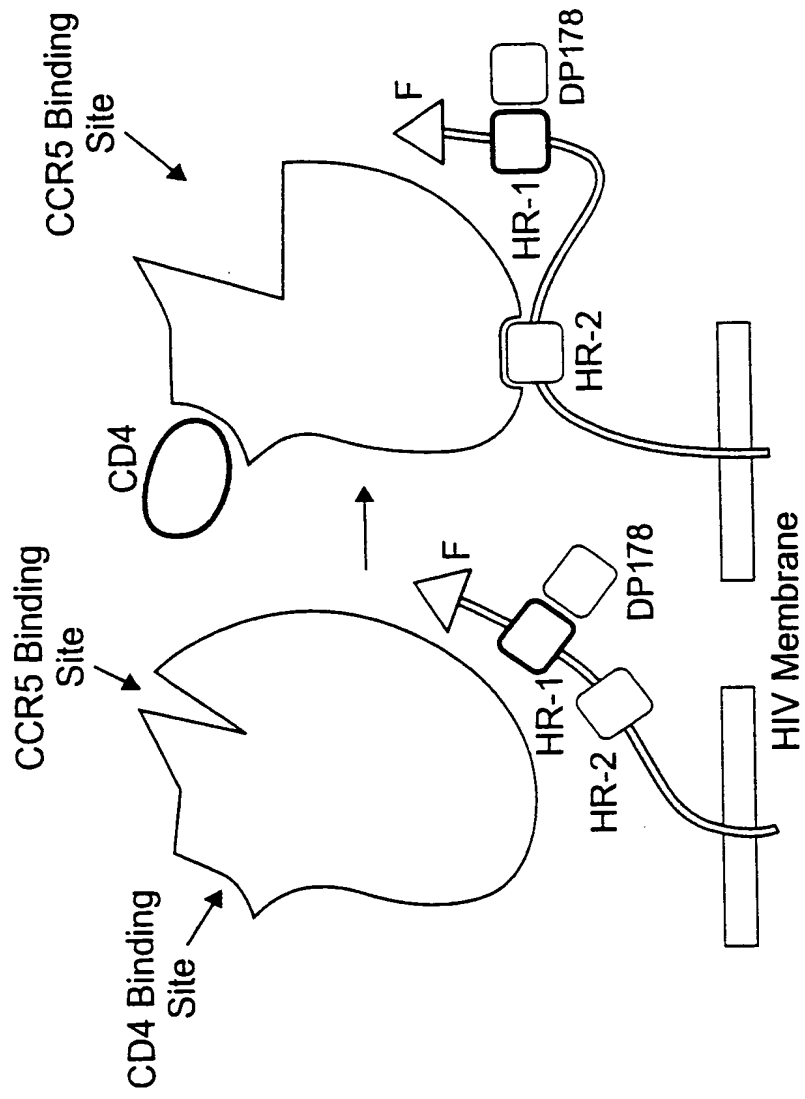


FIGURE 24

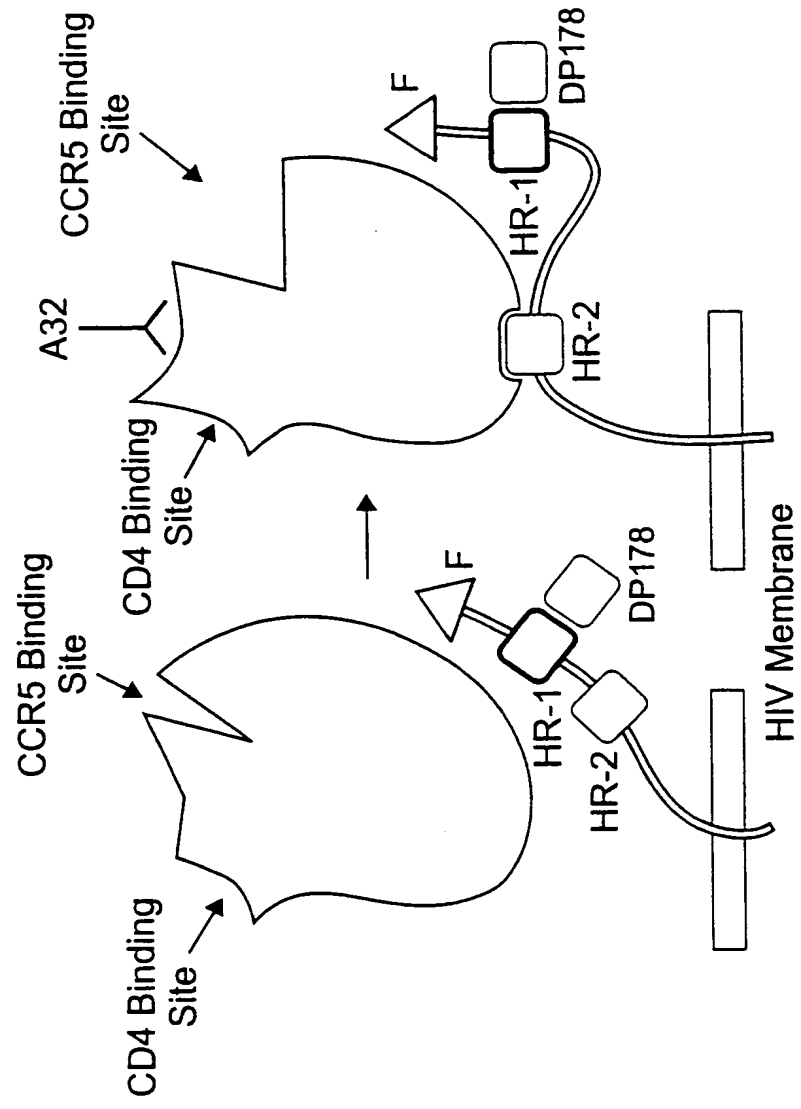


FIGURE 25

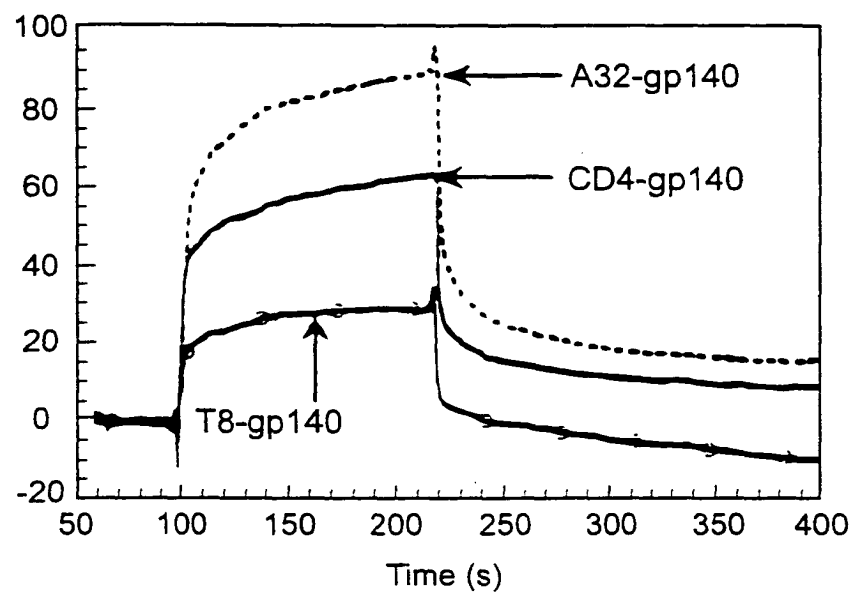


FIGURE 26

Figure 27

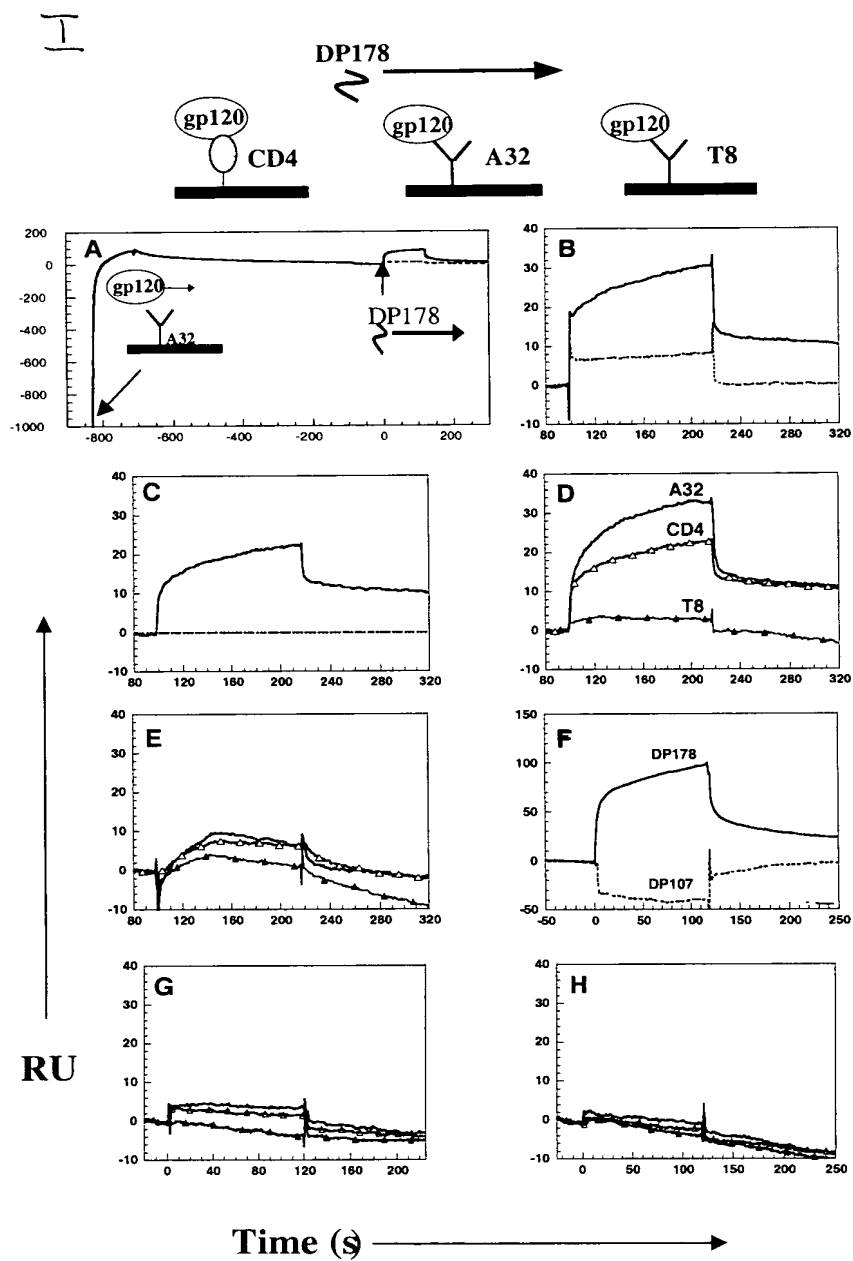
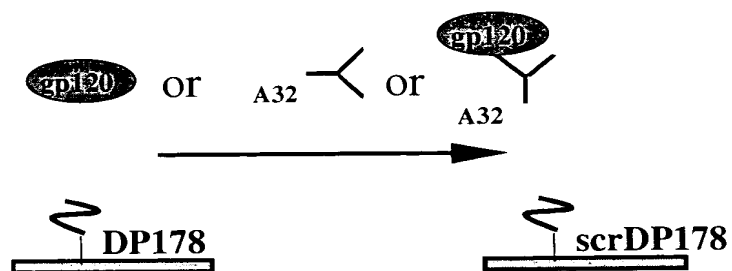
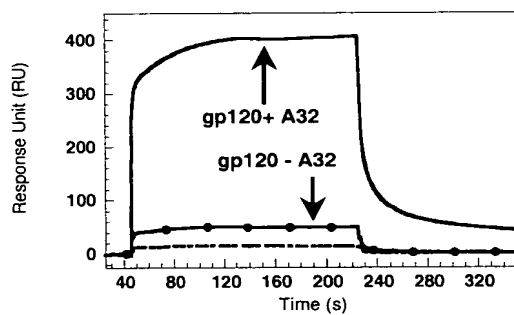


Figure 28

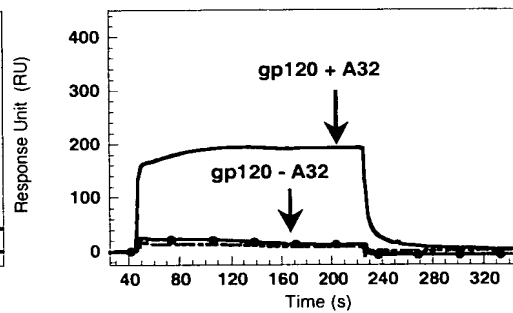
E



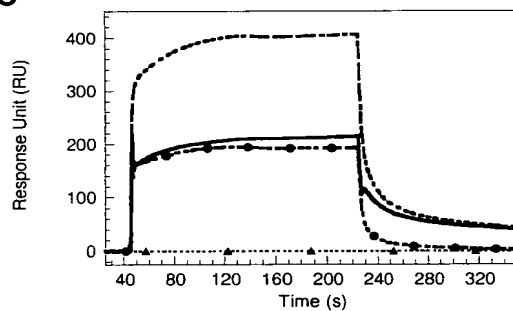
A



B



C



D

	off-rate ( $s^{-1}$ )	
	$k_{d1}$ (fast)	$k_{d2}$ (slow)
- A32	0.017	-
+ A32	0.020	0.0016

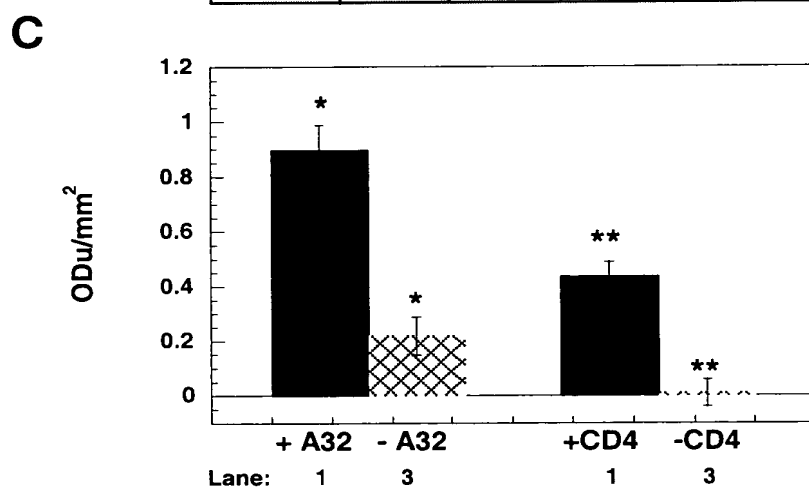
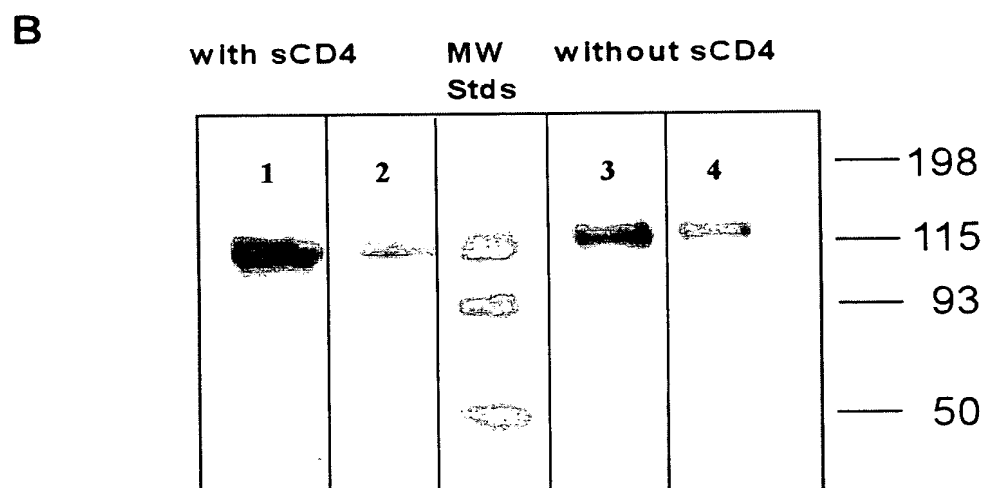
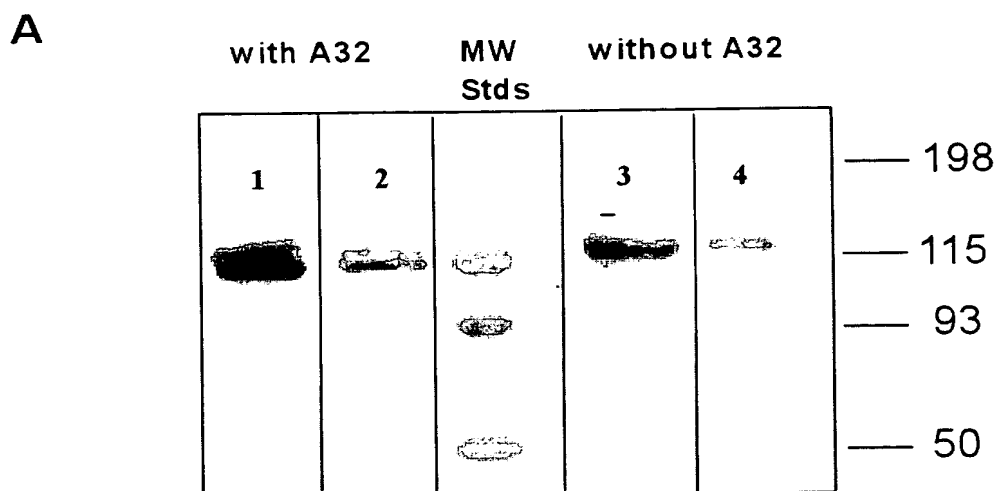
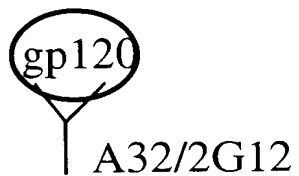
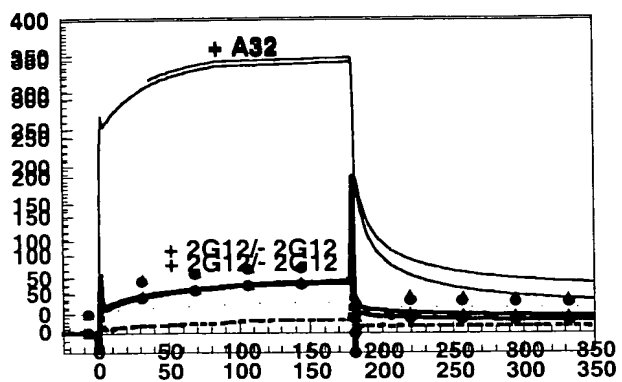
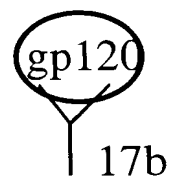
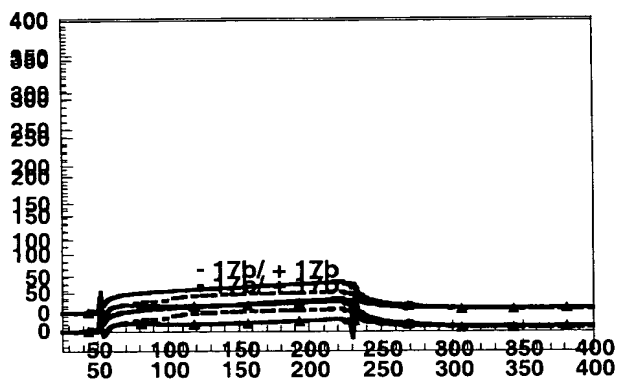


Figure 29

A



B



C

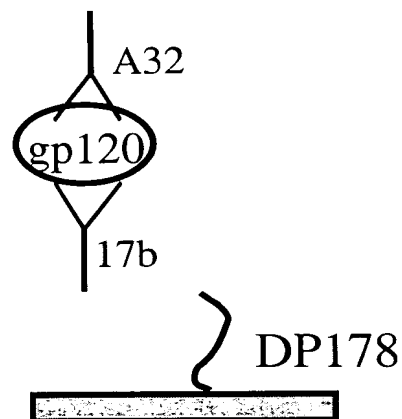
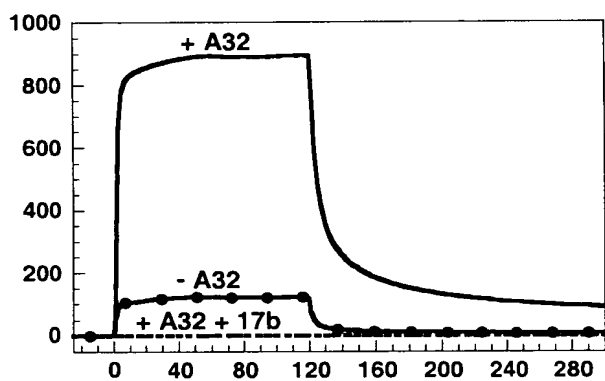
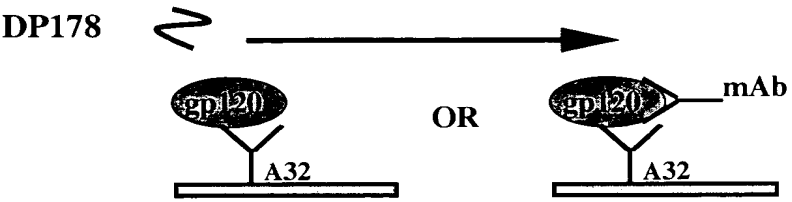


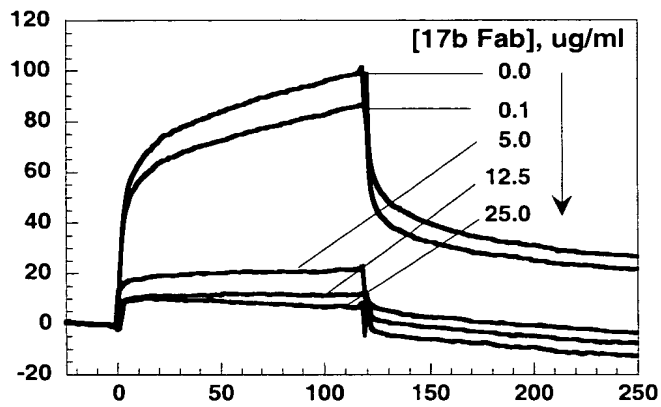
Figure 30

Figure 30

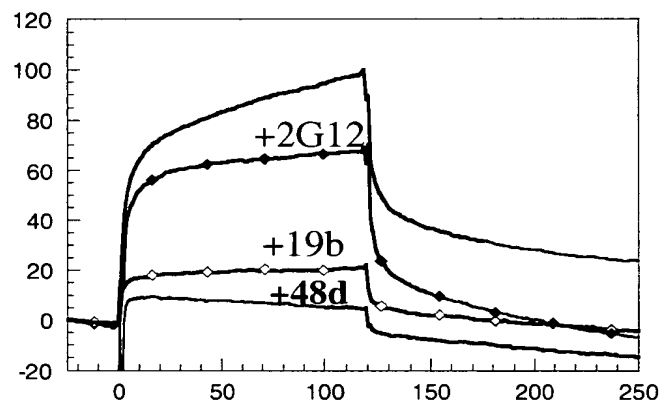
G



D



E



F

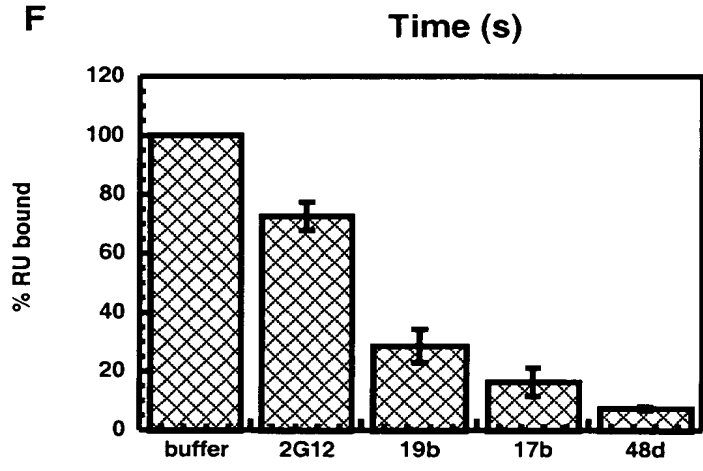


Figure 31

DP178 +/- C4/V3/C4-V3 peptide

